

**PHOTOCATALYTIC HYDROPHILIC MEMBER AND ITS PRODUCTION**

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**Abstract**

**PROBLEM TO BE SOLVED:** To obtain a photocatalytic member of which the surface can be kept highly hydrophilic for a long term by fixing a surface layer contg. a photocatalytic TiO<sub>2</sub> and WO<sub>3</sub> on the surface of a substrate and causing the surface to chemically adsorb a specific substance so that the surface exhibits a high hydrophilicity in response to photoexcitation of a photocatalyst.

**SOLUTION:** A surface layer contg. a photocatalytic TiO<sub>2</sub> (e.g. anatase titanium oxide) and WO<sub>3</sub> is fixed on the surface of a substrate (e.g. soda lime glass), and at least a part of the surface of the surface layer is caused to chemically adsorb an electron attractive substance having an electron attractive group stronger than a hydroxyl group of a sulfo, nitro, sulfuric, or nitric group. Pref. the surface hydrophilicity due to the photoexcitation of the photocatalyst is 10 degrees or lower in terms of contact angle. This member is produced e.g. by coating the surface of a substrate with a mixture comprising photocatalytic TiO<sub>2</sub> particles and tungstic acid, applying (NH<sub>4</sub>)<sub>2</sub> SO<sub>4</sub> thereto, and thermally treating at 400-800 deg.C.

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